CLAIMS

1. An integrated circuit package bond pad, comprising:

an insulating layer;

an electrode located over the insulating layer and having a first surface configured to be bonded to external circuitry and a second surface opposite the first surface; and

a plurality of conductive members located in the insulating layer, wherein ones of the plurality of conductive members contact the second surface of the electrode.

2. The bond pad of claim 1 wherein the electrode includes a plurality of discrete conductors separated by portions of a dielectric layer.

3. The bond pad of claim 1 wherein the plurality of conductive members each have a shape selected from the group consisting of:

a square cube;
a rectangular cube; and
a cylinder.

4. The bond pad of claim 1 wherein the plurality of conductive members each have a cross-shaped footprint.

5. The bond pad of claim 1 wherein at least two of the ones of the plurality of conductive members have a first size and at least two of the ones of the plurality of conductive members have a second size.

6. The bond pad of claim 1 wherein the ones of the plurality of conductive members are first ones each having a first shape, wherein second ones of the plurality of conductive members each have a second shape.

7. The bond pad of claim 1 wherein each of the plurality of conductive members comprises a material selected from the group consisting of:

metal;

doped polysilicon; and
metal silicide.

8. The bond pad of claim 1 wherein at least two of the plurality of conductive members are located in a portion of the insulating layer outside a perimeter of the electrode.

9. The bond pad of claim 1 wherein a volumetric ratio of the ones of the plurality of conductive members to the insulating layer ranges between about 1:1 and about 1:5.

10. The bond pad of claim 1 wherein the first surface of the electrode has a serrated thickness profile.

11. A method of manufacturing an integrated circuit package bond pad, comprising:
forming an insulating layer over a substrate;
forming a plurality of conductive members in the insulating layer; and
forming an electrode over the insulating layer, the electrode having:
  a first surface configured to be bonded to external circuitry; and
  a second surface opposite the first surface and contacting ones of the plurality of conductive members.

12. The method of claim 11 wherein forming the electrode includes forming a plurality of discrete conductors separated by portions of a dielectric layer.

13. The method of claim 11 wherein forming the plurality of conductive members includes depositing a material selected from the group consisting of:
metal;
doped polysilicon; and
metal silicide.

14. The method of claim 11 wherein the first surface of the electrode has a serrated thickness profile.

15. A method of manufacturing an electronic device, comprising:

providing a substrate having a first bond pad located thereon;

providing an integrated circuit package having a second bond pad located thereon, the second bond pad including:

an insulating layer;

an electrode located over the insulating layer and having a first surface configured to be bonded to the first bond pad and a second surface opposite the first surface; and

a plurality of conductive members located in the insulating layer, wherein ones of the plurality of conductive members contact the second surface of the electrode; and

forming a bond electrically coupling the first and second bond pads.

16. The method of claim 15 wherein the electrode includes a plurality of discrete conductors separated by portions of a dielectric layer.

17. The method of claim 15 wherein the plurality of conductive members each have a rectangular cube shape.

18. The method of claim 15 wherein a volumetric ratio of the ones of the plurality of conductive members to the insulating layer ranges between about 1:1 and about 1:5.

19. The method of claim 15 wherein the first surface of the electrode has a serrated thickness profile.

20. The method of claim 15 wherein forming a bond includes a process selected from the group consisting of:

wire bonding; and

surface mounting.